

Appl. No. 09/928717
Amdt. dated September 14, 2006
Reply to Office Action of July 14, 2006

Remarks/Arguments

1. **Amendments to the claims:** Claim 32 has been amended to more clearly recite that the straight strut formed between adjacent cones is from the vertex of one cone to the vertex of adjacent cones. The straight strut between vertexes is shown in FIG. 4 of the application as originally filed. An illustration of the straight strut is also shown in a different view in the attached "Exhibit A," which is provided merely to illustrate that no matter what the thickness of the individual cone elements, there will always be a straight strut between vertexes of adjacent cones. This amendment introduces no new subject matter and Applicant requests that the amended claim be approved and entered.
2. **35 U.S.C. § 102 Rejections:** Examiner rejected claim 32 under 35 U.S.C. § 102(b) as being anticipated by Fernstrum (U.S. Patent 5,340,349). Femstrum discloses a plurality of cones arranged adjacent one another, with their vertexes all pointing toward the center of the sphere. FIG. 4 of Fernstrum shows two adjacent cones. It is clear from this illustration that the Fernstrum arrangement of cones does not disclose and cannot ever have a straight strut formed between vertexes of adjacent cones. Fernstrum, thus, does not anticipate the invention of claim 32 of the present invention. Applicant requests that Examiner withdraw this rejection and allow claim 32.
3. Examiner rejected claims 32, and 42 – 47 under 35 U.S.C. § 102(b) as being anticipated by Fuller (U.S. Patent 3,203,144). Examiner asserts that Fuller discloses a structure comprising a plurality of conical elements (Fuller, 3), each conical element having a cone base (8), a cone wall (3) and a vertex (6). Applicant disagrees with this assertion. The Fuller patent discloses a laminar geodesic dome made up of diamond shaped panels that are bent or folded along a straight line, so as to form two isosceles

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triangles per each panel. The diamond-shaped panel has a long axis and the fold axis is either transverse to or congruent with the long axis. See Fuller, FIGS. 3 and 7 and col. 5, lines 8 – 10. The Fuller dome structures are made up of panels 3 and 4. Fuller refers to these panels as "diamond panels." See Fuller, col. 4, lines 32 – 36 and col. 5, lines 2 – 4. The purpose of the fold is to form two planar triangular facets in each panel. See Fuller col. 2, lines 1 – 5. Fuller FIGS. 9 – 16 illustrate various arrangements of panels 3 or 4 to form a dome. See also col. 5, lines.

4. Nowhere in the figures or the specification is there any discussion or illustration of cones being used to form the dome, a cone having a vertex and a cone wall that is defined by straight lines that extend from the cone base and intersect each other at the cone vertex, as recited in claim 32 of the present application. Fuller does not anticipate claim 32 and, because claims 42 – 47 depend from claim 32 and include the limitations of that claim, it also does not anticipate the dependent claims.

5. Applicant requests that Examiner withdraw this rejection and allow these claims.

6. **35 U.S.C. § 103(a) Rejections:** Examiner rejected claim 42 as being unpatentable over Fernstrum. Fernstrum does not disclose the structure recited in claim 32, the base claim for claim 42, and therefore, cannot render claim 42 unpatentable. Applicant requests that Examiner withdraw this rejection.

7. Examiner further rejected claims 32 – 38 as being unpatentable over Chamberlain in view of Fuller. It is difficult for Applicant to understand this rejection, because neither Chamberlain nor Fuller discloses a structure that has even a single

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cone as defined in claim 32 of the present application, let alone a structure formed by an arrangement of such cones. The commonality in the cited disclosures is a structure that is or approximates the shape of a sphere or partial sphere. But there the similarity ends. Chamberlain's structure is constructed of partial spherical elements, which are continuously curved elements, that is, the radius of curvature is the same at any location on the surface of the partial spherical element. Fuller's structure is constructed of triangular planar elements or facets (diamond panels folded to form two triangles per panel). These planar facets are assembled with a high degree of complexity and precision to achieve the desired approximately spherical shape. It is easy to see that Chamberlain's elements can be assembled to create a sphere. Since Fuller, we also understand that an approximately spherical shape can be constructed from planar triangular elements that are very carefully dimensioned and arranged in a pattern that creates a grid of great circle lines. A person of ordinary skill in the art, however, would not learn from studying Chamberlain and Fuller that one could construct an approximately spherical or an undulating structure from right cones. These cones are neither planar nor are they continuously curved. Not only that, none of the cited prior art teaches the concept of arranging the cones as is done in the present invention. Any structure seen in the prior art that was constructed of right cones arranged the cones with the vertexes oriented toward the center of a sphere.

8. In order to render an invention obvious, the cited prior art must disclose all of the elements claimed. Neither Fuller nor Chamberlain, nor any other cited prior art references, alone or in combination, discloses a structure constructed of cones that are arranged as recited in claim 32. The prior art, thus, does not render claims 32 – 38 unpatentable for reasons of obviousness. Accordingly, Applicant requests that

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Examiner withdraw this rejection and allow all claims currently presented.

9. **Summary:** Examiner raised several rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103(a). Applicant has successfully traversed each and every rejection raised by Examiner and now requests that Examiner withdraw all rejections and allow the claims as presented in this paper.

10. This paper is presented within the shortened statutory period. No additional fees are due.

Respectfully submitted,



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Enclosed: Exhibit "A"